



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/825,304

04/16/2004

Wataru Matsumoto

2611-0124PUS2

7760

2292

7590

12/27/2004

BIRCH STEWART KOLASCH & BIRCH

PO BOX 747

FALLS CHURCH, VA 22040-0747

EXAMINER

SAM, PHIRIN

ART UNIT

PAPER NUMBER

2661

DATE MAILED: 12/27/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/825,304

Applicant(s)

MATSUMOTO ET AL.

Examiner

Phirin Sam

Art Unit

2661

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 April 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,5,6,9,10,13 and 14 is/are rejected.
- 7) ☒ Claim(s) 3,4,7,8,11,12,15 and 16 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☒ Certified copies of the priority documents have been received in Application No. 09/509,717.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.



PHIRIN SAM

PRIMARY EXAMINER

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 04/16/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 2, 5, 6, 9, 10, 13, and 14 are rejected under 35 U.S.C. 102(e) as being anticipated by US Patent No. 6,480,475 (hereinafter called "Modlin").

Modlin discloses the invention (**claim 1**) as claimed including a communication system which performs data communication (see col. 1, lines 23-24) by a discrete multi-tone modem scheme (see col. 1, lines 36-37) between a plurality of data communication units using the time-division half-duplex communication function, (wherein the TD half-duplex communication, which can alternatively be considered as TD duplex or time compression multiplex communications, avoid collisions or interference between information packets communicated in the two directions of communication on the communications path by ensuring that the communications in the two directions take place at different times), wherein the ratio between the data transmission time suitable for data transmission and the quasi-data transmission time other than the data transmission time within one period changes dynamically, characterized in that bits are assigned in such a manner that the data of a given period is transmitted during the

Art Unit: 2661

data transmission time of one period, and wherein dummy bits are assigned to the portion of the data transmission time to which the data to be transmitted has not assigned (see Figs. 3 and 4, elements 308, 314, 406, and 408, col. 8, lines 48-55, col. 9, lines 44-67, col. 10, lines 24-47, col. 11, lines 9-25, 32-49, and col. 12, lines 1-15).

Regarding claim 2, Modlin discloses a communication system which performs data communication by a discrete multi-tone modem scheme between a plurality of data communication units using the time-division half-duplex communication function, wherein the ratio between the data transmission time suitable for data transmission and the quasi-data transmission time other than the data transmission time within one period changes dynamically, characterized in that bits are assigned in such a manner that the data of a given period is transmitted during the data transmission time and the quasi-data transmission time of one Period, and wherein dummy bits are assigned to the portion the data transmission time and the portion of the quasi-data transmission time to which the data to be transmitted has not assigned (see Figs. 3 and 4, elements 308, 314, 406, and 408, col. 8, lines 48-55, col. 9, lines 44-67, col. 10, lines 24-47, col. 11, lines 9-25, 32-49, 60-67, and col. 12, lines 1-15).

Regarding claim 5, Modlin communication a system which performs data communication by a discrete multi-tone modem scheme between a plurality of data communication units using the time-division half-duplex communication function, wherein the ratio between the data transmission time suitable for data transmission and the quasi-data transmission time other than time within one period changes dynamically, the data of a given period are characterized in that all reproduced based on the portion of the received data assigned

Art Unit: 2661

to the data transmission time of one period (see Figs. 3 and 4, col. 8, lines 48-55, col. 9, lines 44-67, col. 10, lines 24-47, col. 11, lines 9-25, 32-49, 60-67, and col. 12, lines 1-15).

Regarding claim 6, Modlin discloses a communication system which performs data communication by a discrete multi-tone modem scheme between a plurality of data communication units using the time-division half-duplex communication function, wherein the ratio between the data transmission time suitable for data transmission and the quasi-data transmission time other than the data transmission time within one period changes dynamically, characterized in that all the data of one period are reproduced based on the portion of the received data assigned to the data transmission time and the quasi-data transmission time of one period (see Figs. 3 and 4, col. 8, lines 48-55, col. 9, lines 44-67, col. 10, lines 24-47, col. 11, lines 9-25, 32-49, 60-67, and col. 12, lines 1-15).

Regarding claim 9, Modlin discloses a communication method of performing data communication by a discrete multi-tone modem scheme between a plurality of data communication units using the time-division half-duplex communication function, wherein the ratio between the data transmission time suitable for data transmission and the quasi-data transmission time other than the data transmission time within one period changes dynamically, characterized in that bits are assigned in such a manner that the data of a given period is transmitted during the data transmission time of one period, and wherein dummy bits are assigned to the portion of the data transmission time to which the data to be transmitted has not assigned (see Figs. 3 and 4, col. 8, lines 48-55, col. 9, lines 44-67, col. 10, lines 24-47, col. 11, lines 9-25, 32-49, 60-67, and col. 12, lines 1-15).

Regarding claim 10, Modlin discloses a communication method of performing data communication by a discrete multi-tone modem scheme between a plurality of data communication units using the time-division half-duplex communication function, wherein the ratio between the data transmission time suitable for data transmission and the quasi-data transmission time other than the data transmission time within one period changes dynamically, characterized in that bits are assigned in such a manner that the data of a given period is transmitted during the data transmission time and the quasi-data transmission time of one period, and wherein dummy bits are assigned to the portion of the data transmission time and the portion of the quasi-data transmission to which the data to be transmitted has not assigned (see Figs. 3 and 4, col. 8, lines 48-55, col. 9, lines 44-67, col. 10, lines 24-47, col. 11, lines 9-25, 32-49, 60-67, and col. 12, lines 1-15).

Regarding claim 13, Modlin discloses communication method of performing data communication by a discrete multi-tone modem scheme between a plurality of data communication units using the time-division half-duplex communication function, wherein the ratio between the data transmission time suitable for data transmission and the quasi-data transmission time other than the data transmission time within one period changes dynamically, characterized in that all the data of a given period are reproduced based on the portion of the received data assigned to the data transmission time of one period (see Figs. 3 and 4, col. 8, lines 48-55, col. 9, lines 44-67, col. 10, lines 24-47, col. 11, lines 9-25, 32-49, 60-67, and col. 12, lines 1-15).

Regarding claim 14, Modlin discloses a communication method of performing data communication by a discrete multi-tone modem scheme between a plurality of data communication units using the time-division half-duplex communication function, wherein the ratio between the data transmission time suitable for data transmission and the quasi-data transmission time other than the data transmission time within one period changes dynamically, characterized in that all the data of one period are reproduced based on the portion of the received data assigned to the data transmission time and the quasi-data transmission time of one period (see Figs. 3 and 4, col. 8, lines 48-55, col. 9, lines 44-67, col. 10, lines 24-47, col. 11, lines 9-25, 32-49, 60-67, and col. 12, lines 1-15).

Allowable Subject Matter

3. Claims 3, 4, 7, 8, 11, 12, 15, and 16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phirin Sam whose telephone number is (571) 272-3082. The examiner can normally be reached on Mon-Fri, 8:00AM - 4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kenneth N Vanderpuye can be reached on (571) 272 - 3078. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2661

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Respectfully submitted,

Date: December 17, 2004

A handwritten signature in black ink, appearing to read "Phirin", is written over a horizontal line.

**PHIRIN SAM
PRIMARY EXAMINER**